BASIS FOR THE AMENDMENT

The Abstract has been replaced with a new Abstract having a single paragraph, as requested by the Examiner. The amended claims are supported by original claims 5, 6 and 14. New Claims 32-34 are supported at page 23, lines 1 to 4 of the specification. New Claims 31-55 have been added to specifically define the use of the claimed tray, the tray itself being as defined by the claims on which they depend. No new matter is believed to be added by entry of the amendments and new claims. Claims 1-4, 7-11, 13-16 and 18-55 are active.

REMARKS

The claimed invention is a tray for carrying a magnetic head for magnetic disks. As discussed in the specification, particles (e.g., conductive fibers) detached from the trays during cleaning (i.e., ultrasonic cleaning) can contaminate the heads, and thereby could cause a "head crash" in a hard disk drive. This problem is particularly acute with magnetoresitive (MR) heads, because hard disk drives using MR heads typically have a much smaller clearance between the head and the hard disk surface. In addition, Applicants have found that the surface roughness of the tray, and the release of ions (e.g., chlorine ions), and volatile components of the tray (e.g., residual chlorinated aliphatic hydrocarbon solvents) can also damage magnetic heads (see specification at pages 5-8) The claimed tray is characterized and defined by its properties and characteristics which obviate these problems. The claims define six embodiments of the invention, as so characterized and discussed at pages 8 to 13 of the specification.

The rejection of the claims under 35 U.S.C. §§ 102(b) or 103(a) over Nahass et al is respectfully traversed.

In rejecting the claims over Nahass et al, the Examiner states:

> Nahass et al has teaches a conductive polymer with carbon fibrils, which may be polycarbonate, and can be formed into a tray for electrical components (abstract, col. 8, lines 25-27). It is unclear how this tray differs from that of the instant claims, as it appears to be made of a similar material and is employed in a similar application. See MPEP 2112.

It is submitted that the claims are neither anticipated by, nor obvious from this reference. Thus, anticipation, within the meaning of 35 U.S.C. § 102, requires complete identity in the prior art. Note In re Arkley, 172 USPQ 524. This manifestly is not the case. The Examiner's characterization of the prior art that a "similar" material is employed in a "similar" application manifestly is no basis for an asserted anticipation.

It is also well established law that for the claimed properties of a material to be inherently possessed by the prior art, these properties must necessarily and inevitably be present. Note Ex parte Levy, 17 USPQ2d 1461. In relying upon Nahass et al, the Examiner apparently considers the use of carbon fibrils in the reference for forming integrated circuit trays as anticipating or making obvious the claimed tray having the particular characteristics and properties defined. However, Applicants submit that the trays of Nahass et al do not necessarily (i.e., inherently) have the claimed properties and characteristics.

Although Nahass et al describes preparing trays from various thermoplastic resins (see cols. 5-6), Nahass et al does not describe resins of any particular grade or purity, or prepared by any particular method. Similarly, Nahass et al fail to describe the diameter of the individual fibrils (Nahass et al only describe the fibril aggregate diameter – see cols. 6-7). However, discussed at pages 30-31 of the specification, resins may be purified by various methods, or may be prepared by a solventless process in order to reduce the level of volatiles and ions discharged by the tray. Furthermore, the number of particles of 1 μm or larger detached from the tray reasonably depends on the size of the individual filler particles (or

fibrils). Moreover, the surface roughness of the tray can be controlled by "modifying the mold surface" (present specification at page 36, lines 4-9). Thus, the characteristics and properties of the claimed tray depend on the selection of *particular grades* of resins and conductive fillers not described in Nahass et al , as well as the *process* by which they are formed into a tray. Thus, the trays of Nahass et al do not necessarily have the properties and characteristics of the claimed tray. Accordingly, Nahass et al fail to anticipate the claimed tray.

Nahass et al describes the preparation of a polymeric composition with superior flexural and tensile strength, coupled with conductivity, high notched impact strength and high tensile elongation. Note column 8 lines 5-27. Nowhere does Nahass et al disclose the use of trays for magnetic heads, or recognize the importance of limiting the number of particles detached from the tray, the amount of chlorine ions dissolved away from the tray, the total amount of volatiles generated by the tray, the smoothness of the tray, etc. As a matter of law, therefore, it would not be obvious to optimize the properties and characteristics of the trays of Nahass et al to provide those of the claimed trays (see M.P.E.P. §2144.05(II)(B)). Accordingly, Nahass et al also fails to suggest the claimed trays.

Applicants note that magnetic heads are extremely delicate, both physically and electronically. Nahass et al discloses only "integrated circuit" trays (note column 8, line 25). The cleanliness requirements for the production of integrated circuits is reasonably different from that of magnetic heads, because "integrated circuits" and magnetic heads are different devices used in different applications. For example, particle contamination on the surface of magnetic heads can cause a "head crash" in a hard disk drive – a problem which would not occur with a typical "integrated circuit." In addition, note the special considerations attached to the use of a tray comprising an MR head, as disclosed at pages 2-3 of the specification. Thus, since Nahass et al describes a different end use for trays, which would reasonably have

different requirements, Nahass et al does not suggest the claimed trays for carrying a magnetic head.

The claims, as amended, now all require and are limited to a maximum of particles becoming detached, surface resistance not normally associated with conventional trays for MR heads, the maximum amount of extractable ions and the maximum amount of generated gas. Superior results are obtained for trays having these characteristics and properties.

For example, as discussed above, if the amount of particles is high, the MR head may be damaged if particles become caught between the head and the disk (i.e., head crash). If the surface resistance is too low or is not stable, electrical damage of the head can occur due to static electricity. Further, if the amount of ions or generated gas is high, corrosion of the MR head is likely to occur. The claimed invention obviates all of these problems.

Furthermore, as pointed out above, the claimed tray obviates problems associated with its use in a particular application, and these problems are neither recognized by, nor solved by the polymeric composition of the reference. The preamble in the claims specifically defining the contemplated use of the tray, such use also being specifically defined by added claims 28-31, gives life and meaning to them and must be given weight. Note In re Bulloch et al, 203 USPQ 171 and Ex parte Futo, 59 USPQ2d 1955. The claimed and defined characteristics and properties are neither disclosed by, nor relevant to the objectives of Nahass et al, and therefore define patentably distinct limitations.

That the results obtained by the claimed invention are superior to the prior art is additionally shown by the comparative evidence in the case. Note the results of Table 2, discussed at page 48 of the specification, of Table 4, discussed at page 58 of the specification, and of Table 5, discussed at page 66 of the specification. These results, additionally, are indicia of unobviousness of the claimed invention.

Accordingly, withdrawal of the rejection of the claims under 35 U.S.C. § 102 and § 103 is requested.

With regard to the objection to the Abstract, it has been corrected in the manner requested by the Examiner.

Applicants respectfully submit that this application is now in condition for allowance. Early notification thereof is earnestly solicited.

Respectfully submitted,

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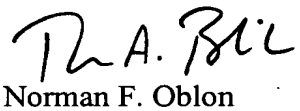

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HEREWITH

IN THE ABSTRACT

(New).

IN THE CLAIMS

Please amend the Claims as follows:

1. (Amended) A tray for carrying a magnetic head for magnetic disks, [which comprises an arm part, a head chip attached to the tip of the arm part, and a lead wire connected to the head chip, characterized in that]

wherein the tray is [one obtained] prepared by molding a conductive thermoplastic resin composition, [and]

when the tray is immersed in 500 ml of pure water while applying 40 kHz ultrasonic thereto for 60 seconds, the number of particles having a particle diameter of 1 μm or larger which detach from the surface of the tray is 5,000 pcs/cm^2 or smaller,

when the tray is immersed in 50 ml of pure water while stirring the water at 60°C for 60 minutes, the amount of chlorine ions which dissolve away from the tray is 0.01 μg or smaller per unit surface area (cm^2) of the tray, and

the tray has a surface resistance of from 10^3 to 10^{12} Ω.

7. (Amended) A tray for carrying a magnetic head for magnetic disks, [which comprises an arm part, a head chip attached to the tip of the arm part, and a lead wire connected to the head chip, characterized in that]

wherein the tray is [one obtained] prepared by injection-molding a conductive polycarbonate resin composition, [and]

the tray has [such] a surface roughness such that the ten-point average roughness (Rz) thereof as determined through a measurement employing a cutoff wavelength of 2.5 mm is 5 μm or smaller,

when the tray is immersed in 50 ml of pure water while stirring the water at 60°C for 60 minutes, the amount of chlorine ions which dissolve away from the tray is 0.01 μg or smaller per unit surface area (cm^2) of the tray, and

~~the tray has a surface resistance of from 10^3 to 10^{12} Ω~~.

8. (Amended) A tray for carrying a magnetic head for magnetic disks, [which comprises an arm part, a head chip attached to the tip of the arm part, and a lead wire connected to the head chip, characterized in that]

wherein the tray is [one obtained] prepared by injection-molding a conductive polycarbonate resin composition,

the tray has a surface resistance of from $1x10^3$ to $1x10^{12}$ Ω, [and]

the tray has [such] a surface roughness such that in a measurement employing a cutoff wavelength of 2.5 mm, the proportion of 10%-cutting-level load length (tp) is 1% or higher and the count of peaks not smaller than ± 0.1 μm based on the center line (Pc) is 100 or smaller per cm of the length of measurement, and

when the tray is immersed in 50 ml of pure water while stirring the water at 60°C for 60 minutes, the amount of chlorine ions which dissolve away from the tray is 0.01 μg or smaller per unit surface area (cm^2) of the tray.

13. (Amended) A tray for carrying a magnetic head for magnetic disks, [which comprises an arm part, a head chip attached to the tip of the arm part, and a lead wire connected to the head chip, characterized in that]

wherein the tray is [one obtained] prepared by molding a polycarbonate resin composition containing a conductive loading material in an amount of from 0.25 to 50% by weight, [and]

the amount of a chlorinated hydrocarbon generated from the tray having a surface area of 12.6 cm^2 under the conditions of a heating temperature of 85°C and an equilibrium time of 16 hours is 0.1 $\mu g/g$ or smaller when determined [with a] by head space gas [chromatogram] chromatography,

when the tray is immersed in 50 ml of pure water while stirring the water at 60°C for 60 minutes, the amount of chlorine ions which dissolve away from the tray is 0.01 μg or smaller per unit surface area (cm^2) of the tray, and

the tray has a surface resistance of from 10^3 to 10^{12} Ω.

22. (Amended) A tray for carrying a magnetic head for magnetic disks [which comprises an arm part, a head chip attached to the tip of the arm part, and a lead wire connected to the head chip], said tray satisfying at least one of the following (1) to [(3)] (5):

(1) the tray is [one obtained] prepared by molding a conductive thermoplastic resin composition and [having] has a surface resistance of from $1x10^3$ to $1x10^{12}$ Ω, [and]

when the tray is immersed in 500 ml of pure water while applying 40 kHz ultrasonic thereto for 60 seconds, the number of particles having a particle diameter of 1 μm or larger which detach from the surface of the tray is 5,000 pcs/cm^2 or smaller;

(2) the tray has [such] a surface roughness such that in a measurement employing a cutoff wavelength of 2.5 mm, the proportion of 10%-cutting-level load length (tp) is 1% or higher and the count of peaks not smaller than ± 0.1 μm based on the center line (Pc) is 100 or smaller per cm of the length of measurement;

(3) the amount of a chlorinated hydrocarbon generated from the tray having a surface area of 12.6 cm^2 under the conditions of a heating temperature of 85°C and an equilibrium

time of 16 hours is 0.1 μg/g or smaller when determined [with a] by head space gas [chromatogram] chromatography;

(4) when the tray is immersed in 50 ml of pure water while stirring the water at 60°C for 60 minutes, the amount of chlorine ions which dissolve away from the tray is 0.01 μg or smaller per unit surface area (cm^2) of the tray; and

(5) the total amount of all gases generated from the tray having a surface area of 12.6 cm^2, the amount of methylene chloride generated therefrom, and the amount of a hydrocarbon generated therefrom in a measurement conducted under the conditions of a heating temperature of 85°C and an equilibrium time of 16 hours are 1 μg/g or smaller, 0.1 μg/g or smaller, and 0.5 μg/g or smaller, respectively, when determined by head space gas chromatography.

23. (Amended) A tray for carrying a magnetic head for magnetic disks, [which comprises an arm part, a head chip attached to the tip of the arm part, and a lead wire connected to the head chip, characterized in that]

wherein the tray is [one obtained] prepared by molding a conductive thermoplastic resin composition, and

when the tray is immersed in 50 ml of pure water while stirring the water at 60°C for 60 minutes, the amount of chlorine ions which dissolve away from the tray is 0.01 μg or smaller per unit surface area (cm^2) of the tray, and

the tray has a surface resistance of from $1x10^3$ to $1x10^{12}$ Ω, and that when the tray is immersed in 500 ml of pure water while applying 40 kHz ultrasonic thereto for 60 seconds, the number of particles having a particle diameter of 1 μm or larger which detach from the surface of the tray is 5,000 pcs/cm^2 or smaller, or

the tray has [such] a surface roughness such that the ten-point average roughness (Rz) thereof as determined through a measurement employing a cutoff wavelength of 2.5 mm is 5

μm or smaller, or

the amount of a chlorinated hydrocarbon generated from the tray having a surface area of 12.6 cm^2 under the conditions of a heating temperature of 85°C and an equilibrium time of 16 hours is 0.1 μg/g or smaller when determined [with a] by head space gas [chromatogram] chromatography.

24. (Amended) A tray for carrying a magnetic head for magnetic disks, [which comprises an arm part, a head chip attached to the tip of the arm part, and a lead wire connected to the head chip, characterized in that]

wherein the tray is [one obtained] prepared by molding a conductive thermoplastic resin composition and [having] has a surface resistance of from [$1x10^5$] $1x10^3$ to $1x10^{12}$ Ω, [and]

when the tray is immersed in 500 ml of pure water while applying 40 kHz ultrasonic thereto for 60 seconds, the number of particles having a particle diameter of 1 μm or larger which detach from the surface of the tray is 3,500 pcs/cm^2 or smaller,

wherein when the tray is immersed in 50 ml of pure water while stirring the water at 60°C for 60 minutes, the amount of chlorine ions which dissolve away from the tray is 0.01 μg or smaller per unit surface area (cm^2) of the tray, and

the amount of a chlorinated hydrocarbon generated from the tray having a surface area of 12.6 cm^2 under the conditions of a heating temperature of 85°C and an equilibrium time of 16 hours is 0.1 μg/g or smaller when determined by head space gas chromatography.

25. (Amended) A tray for carrying a magnetic head for magnetic disks, [which comprises an arm part, a head chip attached to the tip of the arm part, and a lead wire connected to the head chip, characterized in that]

wherein the tray is [one obtained] prepared by molding a conductive thermoplastic resin composition and [having] has a surface resistance of from $1x10^3$ to $1x10^{12}$ Ω,

when the tray is immersed in 500 ml of pure water while applying 40 kHz ultrasonic thereto for 60 seconds, the number of particles having a particle diameter of 1 μm or larger which detach from the surface of the tray is 5,000 pcs/cm^2 or smaller,

the tray has [such] a surface roughness such that the ten-point average roughness (Rz) thereof as determined through a measurement employing a cutoff wavelength of 2.5 mm is 5 μm or smaller, [and]

the amount of a chlorinated hydrocarbon generated from the tray having a surface area of 12.6 cm^2 under the conditions of a heating temperature of 85°C and an equilibrium time of 16 hours is 0.1 μg/g or smaller when determined with a head space gas chromatogram, and

when the tray is immersed in 50 ml of pure water while stirring the water at 60°C for 60 minutes, the amount of chlorine ions which dissolve away from the tray is 0.01 μg or smaller per unit surface area (cm^2) of the tray.

26. (Amended) A tray for carrying a magnetic head for magnetic disks [which comprises an arm part, a head chip attached to the tip of the arm part, and a lead wire connected to the head chip],

wherein the tray [being one obtained] is prepared by molding a conductive thermoplastic resin composition and [having] has a surface resistance of from $1x10^3$ to $1x10^{12}$ Ω, [and]

wherein the tray [having such] has a surface roughness such that in a measurement employing a cutoff wavelength of 2.5 mm, the proportion of 10%-cutting-level load length (tp) is lower than 4%,

when the tray is immersed in 50 ml of pure water while stirring the water at 60°C for 60 minutes, the amount of chlorine ions which dissolve away from the tray is 0.01 μg or smaller per unit surface area (cm^2) of the tray, and

the amount of a chlorinated hydrocarbon generated from the tray having a surface area

of 12.6 cm^2 under the conditions of a heating temperature of 85°C and an equilibrium time of 16 hours is 0.1 $\mu g/g$ or smaller when determined with a head space gas chromatogram.

Claims 28-55. (New).